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21171	7590	12/19/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			CHU, KIM KWOK	
			ART UNIT	PAPER NUMBER
			2653	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/852,002		PARK, SOO-HAN	
	Examiner		Art Unit	
	Kim-Kwok CHU		2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 9/19/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-12, 15-17, 20-26 and 30-32 is/are allowed.
- 6) ☒ Claim(s) 1-4, 13, 14, 18, 19, 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Remarks

1. Applicant's Remarks filed on September 19, 2005 have been fully considered but they are not persuasive.

(a) With respect to the Remarks on claims 1 and 2, Applicant states that the prior art of Kajiyama has no reasonable chance of success or motivation to replace the photo detector 8 (page 16 of the Remarks, lines 31-34). Accordingly, both the prior art of Kajiyama's and Abe's detectors detect light beams reflected from the disc. Furthermore, both detectors detect DVD and CD discs. Since the prior art of Kajiyama does not disclose how the photo-detective elements lay out in his detector 8, it would have been obvious to use a similar detector which is able to perform the same function. In other words, it would have been obvious to one of ordinary skill in the art to replace Kajiyama's detector 8 with Abe's detector 28 because Abe illustrates the detail structure of his photo-detective elements.

(b) Applicant does not agree that the prior art of Kajiyama and Abe can be combined because as a result Kajiyama required to redesign his remaining components (page 16 of the Remarks, last 6th and 7th lines). Accordingly, although Kajiyama teaches the detected signal from the photodetector 8 applies to a determining circuit 14 for identifying the type of optical disk mounted to the apparatus, the other RF demodulating

circuit 16 connected to the photodetector 8 is a general purpose recorded signal detection means which can be applied to Abe's photodetector 28 for processing detected signals. In other words, When the Kajiyama's photodetector 8 is replaced by Abe's photodetector 28, Kajiyama's RF demodulating circuit 16 can be used to receive and process signals reflected on the replaced photodetector 28 from a CD or DVD disk.

(c) With respect to the Remarks on claims 3, 4, 13, 14, 18, 19, 28 and 29, Applicant states that the prior art of Abe's diffraction grating 112A is not his embodiment but an example of the conventional optical pick-up configuration (page 15 of the Remarks, lines 22 and 23). Accordingly, the diffraction grating 112A as illustrated in Abe's Fig. 4 is the same diffraction grating 22A as illustrated in Figs. 9 and 10. Abe does not introduce a new form of diffraction grating. On the other hand, Abe explains the difference between Fig. 4 and Fig. 10 is that the prism 113 can be eliminated (Figs. 4 and 10; column 15, lines 17-36).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.*

3. Claims 3, 4, 13, 14, 18, 19, 28 and 29 are rejected under 35 U.S.C. § 102(e) as being anticipated by Abe et al. (U.S. Patent 6,084,843).

Abe teaches a disk player having all the elements and means as cited in claims 3 and 4. For example, Abe teaches the following:

(a) as in claim 3, a first laser diode 21A emitting a first laser beam to a first optical disk 41A (Fig. 10);

(b) as in claim 3, a second laser diode 21B emitting a second laser beam to a second optical disc 41B (Fig. 10);

(c) as in claim 3, a single diffraction grating 112A selectively splitting the first and the second laser beams into three rays depending on which optical disk is to be accessed, wherein the three rays comprise a main ray and two sub-rays

(Figs. 3, 6 and 7; diffractive grating 112A splits a light beam into zero order and plus, minus 1st order rays);

(d) as in claim 3, a photo-detector 28 actively receiving the three rays of the first laser beam and the three rays of the second laser beam at different detecting portions for data recording and/or reproduction and error detection and compensation (Fig. 11; column 4, lines 50-58);

(e) as in claim 3, the detecting portions comprise a central detecting portion and two peripheral detecting portions (Fig. 11);

(f) as in claim 4, the photodetector 28 receives the main ray of the first laser beam on the central detecting portion to determine a focus error (Fig. 11; column 14, lines 60-65);

(g) as in claim 4, the main ray of the first laser beam is used to record and/or reproduce the data on/from the first optical disk (Fig. 11); and

(h) as in claim 4, the photodetector receives the sub-rays of the first laser beam on the peripheral detecting portions to determine a tracking error (Fig. 11; column 14, lines 55-60).

4. Claims 13 and 14 have limitations similar to those treated in the above rejection, and are met by the references as discussed above. Claims 13 and 14 however also recite the following limitations which are taught by the prior art of Abe. For example, Abe teaches the following:

(a) as in claim 13, the photo-detector is a six-split photo-detector comprising four cells on a central detecting portion and two cells on peripheral detecting portions (Fig. 10);

(b) as in claim 14, the main ray of the first laser beam arranged on an optical axis is detected from the central detecting portion 28A to record and/or reproduce the data on/from the first optical disk (Fig. 11); and

(c) as in claim 14, the main ray of the second laser beam strayed from the optical axis is detected from one of the peripheral detecting portions 28B to record and/or reproduce the data on/from the second optical disk (Fig. 11).

5. Method claims 18 and 19 are drawn to the method of using the corresponding apparatus claimed in claims 3 and 4. Therefore method claims 18 and 19 correspond to apparatus claims 3 and 4 and are rejected for the same reasons of anticipation as used above.

6. Method claim 28 is drawn to the method of using the corresponding apparatus claimed in claim 3. Therefore method claim 18 corresponds to apparatus claim 3 and is rejected for the same reasons of anticipation as used above.

7. Claim 29 has limitations similar to those treated in the above rejection, and is met by the references as discussed above. Claim 29 however also recites the following limitations which are taught by the prior art of Abe. For example, Abe teaches the following:

(a) as in claim 29, the main ray of the first laser beam arranged on an optical axis is detected from the central detecting portion 28A to record and/or reproduce the data on/from the first optical disk (Fig. 11); and

(b) as in claim 29, the main ray of the second laser beam strayed from the optical axis is detected from one of the peripheral detecting portions 28B to record and/or reproduce the data on/from the second optical disk (Fig. 29).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajiyama et al. (U.S. Patent 6,552,990) in view of Abe et al. (U.S. Patent 6,084,843).

Kajiyama teaches an apparatus for recording and/or reproducing data on and/or from various types of optical disks very similar to that of the present invention. For example, Kajiyama teaches the following:

(a) as in claim 1, a first laser diode 1a emits a first laser beam (Fig. 2; laser diode 1a is for DVD and laser diode 1b is for CD; column 8, lines 18-23);

(b) as in claim 1, a second laser diode 1b emits a second laser beam (Fig. 2; laser diode 1a is for DVD and laser diode 1b is for CD; column 8, lines 18-23);

(c) as in claim 1, a diffraction grating 5 selectively splitting the first and the second laser beams into a main ray and two sub-rays (Fig. 20);

(d) as in claim 1, the diffraction grating 5 is movable between a first position and a second position along an optical axis (Fig. 2; column 7, lines 55 and 56);

(e) as in claim 1, a photo-detector 8 for receiving the main ray based on the first position of the diffraction grating (Fig. 2);

(f) as in claim 1, a photo-detector 8 for receiving the main ray based on the second position of the diffraction grating (Fig. 2);

(g) as in claim 1, the first and second laser diode 1a, 1b are formed in one package 1 (Fig. 2); and

(h) as in claim 2, the photodetector 1 is a single unit on which both the first and second detecting portions 1a, 1b are formed (Fig. 2).

However, Kajiyama does not teach the following:

(a) as in claim 1, the photo-detector 8 having at least a first detecting portion and a second detection portion;

(b) as in claim 1, the first detection portion at a first location receiving the main ray of the first laser beam; and

(c) as in claim 1, the second detection portion is at a different location receiving the main ray of the second laser beam.

Abe teaches an optical pickup having the following features:

(a) a photodetector having at least a first detecting portion 28B and a second detection portion 28A (Figs. 11 and 26; column 9, lines 1-39);

(b) the first detection portion 28B at a first location receives the main ray of the first laser beam (Figs. 11, 26; 28B is the DVD signal detecting); and

(c) the second detection portion 28A at a different location receives the main ray of the second laser beam (Figs. 11, 26; 28A is the CD signal detecting portion).

To detect the reflected light beams of two laser sources of different wavelengths arranged side by side suitable for a CD and DVD disk drive, a photodetector should have two detecting portions placed into a conjugate position where each detecting portion receives its corresponding reflected light beam. Hence, to receive Kajiyama's light beams reflected from two different disks such as CD and DVD on two different locations on Kajiyama's photodetector 8, it would have been obvious to one of ordinary skill in the art to replace the photodetector 8 with Abe's photodetector 28A, 28B, because the

first detecting portion 28B has a photodetecting element layout designed as differential phase detection system for detecting light beams reflected from a DVD and the second detecting portion 28A has a photodetecting element layout designed as a three beam detection system for detecting light beams reflected from a CD.

Allowable Subject Matter

10. Claims 5-12, 15-17 20-26 and 30-32 are allowable.

11. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 5, 17, 20 and 32, the prior art of record fails to teach or fairly suggest the following features:

(a) the photodetector receives the main ray of the second laser beam on one of the peripheral detecting portions to record and/or reproduce the data on/from the second optical disk; and

(b) the photodetector receives one of the two sub-rays of the second laser beam on the central detecting portion to determine a focus error and a tracking error on the second optical disk.

As in claims 12 and 27, the prior art of record fails to teach or fairly suggest the following features:

(a) an error occurring due to initial positions of the first laser diode and the second laser diode is compensated for

by selectively moving the diffraction grating between a first position and a second position; and

(b) the first position being such that the main ray of the first laser beam is incident on the central detecting portion, while the two sub-rays are incident on the peripheral detecting portion, and the second position being such that the main ray of the second laser beam is incident on one of the peripheral detecting portions, while one of the two sub-rays is incident on the central detecting portion.

As in claims 15 and 30, the prior art of record fail to teach or fairly suggest the following features:

(a) receiving the main ray of the first laser beam on four cells of the central detecting portion to determine a focus error and to record and/or reproduce the data on/from the first optical disk;

(b) receiving the sub-rays of the first laser beam on two cells of the peripheral detecting portions, respectively, to determine a tracking error;

(c) receiving the main ray of the second laser beam on one of the two cells of the peripheral detecting portions to record and/or reproduce the data on/from the second optical disk; and

(d) receiving one of the two sub-rays of the second laser beam on the four cells of the central detecting portion to

determine a focus error and a tracking error on the second optical disk.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

13. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action

14. Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communications intended for entry. Or:

(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

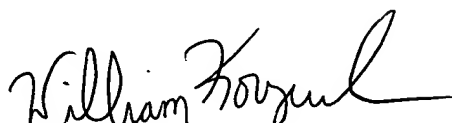
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner AU2653
November 29, 2005

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11/29/05


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